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# Rhodora

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## SOME CRITICAL PLANTS OF ATLANTIC NORTH AMERICA.

C. A. WEATHERBY.

THE following notes are the result of an attempt to name accurately certain critical plants contained in the collections of the late Professor E. J. Grimes from southeastern Virginia. In so far as they have merit, it is hoped that they may serve, in some sort, as a memorial of the thorough and keenly discriminating work which, during two seasons, he had done as collector and student of the too little known flora of the southern coastal plain, as represented in his region. All botanists interested in the taxonomy, distribution, and ecology of the plants of eastern North America may well regret his untimely death.

Though the bulk of the finished notes is not great, some of them have called for a considerable correspondence. I am indebted for the loan of specimens, for needed information, or for other aid in the preparation of this paper, to Prof. J. F. Collins, Dr. A. B. Stout, Mr. K. K. Mackenzie, Mr. Bayard Long and, like all students of our eastern flora, to Prof. M. L. Fernald. To all, my thanks are extended.

CAREX MITCHELLIANA M. A. Curtis, Am. Journ. Sci. xlv. 84 (1843); Dewey, op. cit. xlviii. 140 (1845) in part, but not as to illustration; Boott, Ill. i. 18, t. 50 (1858), at least as to perigynium figured.—Similar to *C. crinita*, var. *gynandra*, but the spikes usually more slender; lowest sheaths slightly hispidulous or rarely smooth; perigynia ovate, 2.5–3.5 mm. long, 1.4–2 mm. wide, lenticular, scarcely inflated, strongly granular-roughened with minute papillae,



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distinctly 2-4-nerved on both sides; achenes ovate or suborbicular, 1.5-2 mm. long, 1.1-1.5 mm. wide, substipitate, not at all bent or contorted.—MASSACHUSETTS: swale by Swan Pond, Dennis, July 23, 1918, *Fernald*, no. 16,473; Harwich, June 10, 1916, *Winslow & Sanford*; swale, West Yarmouth, July 22, 1907, *E. W. Sinnott*; Hyannis, July 4, 1874, *Wm. Booth*. NEW JERSEY: Pemberton, July, 1873, *Canby* (sheaths smooth); New Egypt, June 10, 1905, *J. H. Grove*, no. 48; Forked River, June 1, 1896, hb. *Joseph Crawford*; Albion, June 26, 1907, *Van Pelt*, no. 2; rich swampy woods, Cape May Court House June 1, 1912, *Bayard Long*, no. 7245. DELAWARE: swamp, Millsboro, June 18, 1875, *Commons*. VIRGINIA: open swamp, 3 miles west of Williamsburg, June 16, 1921, *Grimes*, no. 3781. SOUTH CAROLINA: Santee Canal, May, *Ravenel*. GEORGIA: bank of woodland stream near Atlanta, May 29, 1901, *Curtiss*, no. 6802. FLORIDA: without date or definite locality, *Croom*. ALABAMA: without definite locality, 1867, *Peters*. The New Jersey and Delaware specimens cited are in the herbarium of the Philadelphia Academy of Sciences.

*C. Mitchelliana* is a rather striking plant of the Coastal Plain and the Piedmont, in its strongly granular perigynia suggesting *C. maritima*, but in all other respects clearly a member of the group of *C. crinita*. From all variants of that species, *C. Mitchelliana* is ordinarily well distinguished by the characters given. *C. crinita*, var. *gynandra*, however, to which *C. Mitchelliana* is nearest and to which it has usually been referred, sometimes has plane achenes; and a single immature specimen from the District of Columbia (Takoma Park, May 17, 1903, *J. H. Painter*, no. 166) suggests an intermediate condition in other characters, in that the young perigynia are granular, but not nerved, and are somewhat inflated. Two sheets, one from western Louisiana, *Hale*, and one from Texas, *Wright*, have uncontorted achenes and the perigynia somewhat granular. But the latter are nerveless, more or less inflated, and, in the *Wright* specimen, obovate; the spikes are densely flowered and the lower sheaths entirely smooth. These plants seem best regarded as an extreme phase of *C. crinita*.

The redescription and citation of specimens above are rendered desirable by the vagueness of Curtis's original diagnosis. Indeed, the evidence as to the application of the name *C. Mitchelliana* is not altogether satisfactory. Curtis places emphasis chiefly on the shortness of the spikes in his plant and mentions none of the perigynial characters which set the species, as here interpreted, apart. Prof. W. C. Coker, who has kindly interested himself in the matter, informs

me that Curtis's phaenogamic herbarium was broken up after his death and distributed among a number of small institutions: under these circumstances I have been unable to locate the type of *C. Mitchelliana*. In the herbarium of Brown University is a sheet on which Olney has noted that the plant represented thereon was submitted to Curtis and that he said it looked "mighty like *C. Mitchelliana*." This plant is the short-spiked form of *C. crinita*, var. *gynandra* distributed by Olney as *C. gynandra*, var. *caroliniana*. In the Dewey herbarium is a specimen labelled, in Dewey's handwriting, "*C. Mitchelliana*. S. Carolina . . . Sent from Rev. J. [sic] Ashley Curtis." This is a stunted individual of the plant here treated as *C. Mitchelliana*. In the cover with it is a specimen, from Olney, of a form of *C. crinita*, var. *gynandra* with unusually short and thick spikes. This corresponds closely with Dewey's figure of *C. Mitchelliana* (Am. Journ. Sci. xlviii, pl. Dd, f. 98) and is probably the specimen there illustrated. It seems likely, therefore, that Dewey, perhaps misled by Curtis's emphasis on the shortness of the spikes, confused the coastal plain plant with reduced forms of *C. crinita*, var. *gynandra*. The nerved and strongly granular perigynium figured by Boott certainly belongs to the coastal plain plant; but the contorted achene and the strongly hispidulous sheaths illustrated suggest that he also had mixed material.

It is possible that Curtis likewise included two things under *C. Mitchelliana*. But, in the absence of the real type, the specimen sent by him<sup>1</sup> to Dewey is apparently the only authentic material available: I am accordingly taking it as typical of the species and as determining the application of the name.

The following key may serve to place *C. Mitchelliana* in relation to the main variants of *C. crinita*:

- a. Perigynia smooth or nearly so, the sides nerveless or sometimes with a single median nerve which reaches the apex; achenes oblong to obovate, variously bent or contorted, often with a deep wrinkle on one or both edges near the middle. *b*
- b. Sheaths smooth and glabrous. *c*
- c. Spikes densely flowered, the somewhat spreading and crowded perigynia inflated, broad-ovoid to obovoid, loosely investing the achene and longer than it. . . . . *C. crinita*.
- c. Spikes less densely flowered, the ascending perigynia not inflated, closely investing the achene and only slightly longer than it, ellipsoid or ovoid. . . . . var. *Porteri*.

<sup>1</sup> The use of the initial "J" instead of "M" in Curtis's name on the label appears to be a slip of the pen on Dewey's part. Curtis's letters to Dr. Gray testify that he sent Carices to Dewey on various occasions.



- b. Lower sheaths rough-hispidulous with short stiff ascending setae; perigynia ascending, moderately inflated, loosely investing the achene, chiefly ovoid.....var. *gynandra*.
- a. Perigynia manifestly granular with numerous minute papillae, distinctly 2-4-nerved on both faces, the nerves reaching the apex or near it, lenticular, scarcely inflated, distinctly longer than the achene; achene broadly ovate to suborbicular, not at all bent or contorted; lowest sheaths slightly hispidulous.....*C. Mitchelliana*

POLYGONUM DENSIFLORUM Meisn. Fl. Bras. v. pt. 1. 14 (1855). *P. portoricense* Bert. ex Small, Monog. Polyg. 46, t. 10 (1895). *P. eciliatum* Stone, Pl. Southern N. J. 423 (1910), as to plant, but not as to name-bringing synonym. *Persicaria portoricensis* Small, Fl. Southeastern U. S. 377 (1903).

There appears to be no nomenclatorial bar, under any code, to the use of the name *Polygonum densiflorum* Meisn. *P. densiflorum* Bl. of the Index Kewensis is an error. What Blume published in the passage cited, Bijdr. 533 (1825), is *P. corymbosum*  $\epsilon$  *densiflorum*, a varietal, not a specific name. Blume's variety is generally referred to *P. chinense* L. as a synonym: I do not find that anyone had raised it to specific rank until this was done through inadvertence by the editors of the Index, long after Meisner had applied the same combination to a wholly different plant.

Meisner's name seems also correctly applied to the plant of the southeastern United States and the West Indies. In his original treatment in the Flora Brasiliensis, Meisner included in *P. densiflorum* a Brazilian plant with somewhat ciliate sheaths and eciliate specimens from Louisiana, the West Indies, Peru and Chile. He specified no type. Later, in the Prodrromus xiv. 121 (1864), he divided the species, as thus constituted, into two varieties,  $\alpha$  *imberbe*, including the plants of the United States, the West Indies and western South America, and  $\beta$  *ciliatum*, based on the Brazilian plant, of which he seems to have had only one collection. Since Meisner placed our plant in var.  $\alpha$  and since in his time a variety so designated was held to be typical of its species when any such distinction was made, it may reasonably be considered that Meisner himself indicated the plant of the United States and the West Indies as typical of *P. densiflorum*. The Chilean and Peruvian plants, of which I have seen no specimens, might not now be regarded as conspecific with ours; in view, however, of the wide ranges of other hydrophilous species of the section *Persicaria*, such as *P. acre*, it is by no means a necessary assumption that they are not.

Urban, Symb. Antill. iv. 211 (1905), reduces *P. densiflorum* to *P. glabrum* Willd. Typical *P. glabrum* of India, however, differs in its smaller perianth, which is nearly or quite destitute of glandular punctation: it seems best considered a distinct species.

The Grimes collection contains excellent material of *P. densiflorum*, already known, in the North, from southern New Jersey and Delaware.

**CHELONE Grimesii**, n. sp., radice ignota; caule simplice, circa 14 dm. alto, minute granulato-puberulo; foliis omnino sessilibus apice acutis vel acuminatis basi rotundatis argute serratis supra viridibus subtus glaucescentibus, medianis ovatis 8–8.5 cm. longis 3–4 cm. latis, inferioribus lanceolatis valde reductis, superioribus ovatis superne gradatim decrescentibus, supremis utrinque minute puberulis; costis foliorum subtus puberulis; bracteis superficie puberulis, margine minute ciliolatis; corollis 2.5–2.8 cm. longis, “purpureis.”

Root not seen; stem simple, apparently about 14 dm. high; leaves all completely sessile, acute or acuminate, rounded at base, sharply serrate, green above, more or less glaucous beneath, the median ovate, 8–8.5 cm. long, 3–4 cm. wide, the lower lanceolate, much reduced in size, the upper ovate, gradually decreasing upward; stem, midribs of the leaves beneath, both surfaces of the uppermost leaves, and bracts minutely granular-puberulent; bracts minutely ciliate; corolla 2.5–2.8 cm. long, purple, according to the collector's notes.—Wooded swamp near Elko, Henrico Co., Virginia, Aug. 8, 1921, *Grimes* no. 4189.

Since there appear to be no floral characters, except color, by which the species of *Chelone* can be separated, I have confined the description of *C. Grimesii* to those vegetative characters which are most distinctive. It is apparently the plant figured by Miller, Ic. Pl. 17 (1760), though that is represented as having very large upper leaves. But all the leaves shown are ovate and are not only pictured, but described, as sessile. Miller states that his plant was sent from Virginia by Clayton and that it is the latter's “*Chelone floribus speciosis pulcherrimis colore rosae damascenae*.” This last appears to have been a temporary opinion; in both the 1759 and 1768 editions of his Dictionary, Miller assigns the Clayton phrase-name to a plant with petiolate leaves (*C. purpurea* Mill.), which is generally referred to *C. obliqua*. Whatever the correct disposition of Clayton's name, it is, in view of the small amount of collecting which has been done in southeastern Virginia, not impossible that he did find the presumably local *C. Grimesii*, and send it to Europe where it was cultivated and figured by Miller; that it died out of English gardens and was lost sight of until found again now in Clayton's region.



The following synopsis will serve to indicate the relation of *C. Grimesii* to other groups in the genus.

- a. Corolla normally white, rarely and exceptionally pink; bracts usually not evidently ciliate; leaves short-petioled or sessile; pubescence, if present, of short, comparatively stiff, mostly unicellular hairs..... } *C. glabra.*  
} *C. Cuthbertii.*
- a. Corolla pink or purple; bracts usually evidently ciliate. b.
- b. Leaves long-petioled; plant (except the bracts) glabrous or sparsely pilose with weak, pluricellular hairs..... } *C. obliqua.*  
} *C. Lyoni.*
- b. Leaves closely sessile; stem and midribs of the leaves beneath minutely granular-puberulent..... *C. Grimesii.*

*GNAPHALIUM OBTUSIFOLIUM* L., var. *micradenium*, n. var., plerumque gracile, caule breviter glanduloso-puberulo non tomentoso; foliis linearibus acutis vel obtusiusculis, 1.8–5.3 cm. longis, 1.5–7 mm. latis, rarius majoribus et tum oblanceolatis, subtus tomentosis supra glandulosis; involucri squamis plerumque acutis.

Usually slender; stem glandular-puberulent, not tomentose; leaves linear, acute or obtusish, 1.8–5.3 cm. long, 1.5–7 mm. wide, rarely exceeding these dimensions and then oblanceolate, the lower surface tomentose, the upper glandular; scales of the involucre mostly acute. —MAINE: Dry, sandy thicket by Sand Pond, Limington, Oxford Co., Aug. 20, 1916, *Fernald, Long & Norton*, no. 14809. MASSACHUSETTS: dry sandy openings among scrub oaks, Barnstable, Oct. 7, 1917, *Fernald*, no. 15870, TYPE in hb. Gray; sandy wood-road through oak and pine barrens, Dennis, Aug. 22, 1918, *Fernald & Long*, nos. 17568, 17667; dry soil, Sandwich, Sept. 16, 1916, *Harger & Woodward*; sandy wood-road, Barnstable, Sept. 17, 1916, *F. T. Hubbard*; sandy wood-road through oak and pine woods and barrens, Barnstable, Sept. 4, 1918, *Fernald & Long*, no. 17569; wood-road in dry, sandy woods, Barnstable, July 15, 1918, *Fernald*, no. 17566. NEW YORK: without locality, 1835, *A. Gray*. NEW JERSEY: dry pine woods, Forked River, Ocean Co., Sept. 6, 1908, *Mackenzie*, no. 3841. VIRGINIA: dry soil along roadside near Williamsburg, Sept. 9, 1921, *Grimes*, no. 4351. MICHIGAN: Bay City, 1873, *F. V. Walthausen*. KENTUCKY: Pine Mt., Harlan Co., Aug., 1893, *Kearney*, no. 219.

The plant here described is apparently the northern and more inland representative of var. *Helleri* (Britton) Blake, which seems to be confined to the coastal plain from Virginia to Florida. In most of the specimens seen, the small, narrow leaves are very characteristic, increasing very little or not at all in size even when the stem attains a height of 4.5 dm. as in the *Grimes* specimen. This foliar character, though generally useful, is more or less inconstant, even in the same colony. The characters of the glandular pubescence, however, appear to correlate perfectly with natural geographic ranges.



*Gnaphalium obtusifolium* and its varieties may be distinguished as follows;

- a. Stem with white, floccose tomentum, not visibly glandular.....*G. obtusifolium*.
- a. Stem glandular, not tomentose, or only slightly so. b
- b. Stem glandular-puberulent; leaves usually linear or linear-lanceolate, 1.8–5.3 cm. long, 1.5–7 mm. wide, 6–10 times or more longer than wide; involucrel bracts mostly acute.....var. *micradenium*.
- b. Stem glandular-villous; leaves usually oblong-lanceolate, 2.5–7 cm. long, 4–13 mm. wide, 4–7 times as long as wide; involucrel bracts mostly obtuse.....var. *Helleri*.

GRAY HERBARIUM

## VACCINIUM ULIGINOSUM AND ITS VAR. ALPINUM.

M. L. FERNALD.

*Vaccinium uliginosum* L. is commonly treated as a circumpolar species which, in America, extends southward to the alpine and subalpine regions of New England and New York and bogs of Oregon. The plant of arctic-alpine range in North America has often been set off on account of its depressed habit and small thick leaves from the typical shrub of European bogs but in none of the differentiations have any characters been pointed out which seem to be more than responses to the exacting summer, and often winter, climatic conditions under which the plant grows in arctic and arctic-alpine eastern America. In comparing the shrub which abounds on the barrens of Greenland, Labrador and Newfoundland and the alpine regions of Quebec and northern New England with the typical European plant a number of points of seemingly real significance come out. In the first place the European is usually a larger and more ascending shrub, and its flowers and fruits are on slender pedicels 3–10 mm. or more long; while the smaller mostly depressed and smaller-leaved shrub of arctic-alpine American distribution has the pedicels very short and often almost obsolete, ranging from 0.1–3.5 mm. in length. In the European plant the horns of the anther are ascending and commonly shorter than the two tubules. This character is well shown in such detailed illustrations as Sturm, *Deutschl. Fl.* iii. t. 12 (1802), *Svensk Botanik*, v. t. 331 (1807), *English Botany*, ed. Syme, vi. t. 878 (1873) or Hartinger & Dalla Torre, *Atlas der Alpenfl.* iii. t. 313 (1884). Con-

trasted with the European, the shrub of eastern and arctic America has the horns considerably longer and more divergent or even somewhat deflexed at base, but occasionally, as in Greenland material illustrated by Warming,<sup>1</sup> they may be strongly ascending though much longer than the tubules. Reichenbach illustrates<sup>2</sup> the horns of the European shrub as equaling the tubules but such European specimens as the writer has been able to examine agree with those illustrated in the other European works above cited.

The decision whether the shrub of arctic-alpine American range should be treated as a distinct species or as a variety is difficult to reach without a fuller knowledge of the old world shrub and the variability of the horns of its anthers but it is at least a well marked American variety, the first satisfactory name for which seems to be *V. uliginosum*, var. *alpinum* Bigelow.<sup>3</sup> Bigelow first put forward the shrub of the alpine summits of New Hampshire as a species, *V. gaultherioides*<sup>4</sup>, but he later considered it a variety of the European *V. uliginosum*.

During the study of the American material of *V. uliginosum* it has become apparent that the shrub of western North America which was separated in 1876 as *V. occidentale* Gray<sup>5</sup> is strikingly like many European specimens and plates of *V. uliginosum*, especially the narrower-leaved extreme of the European shrub. The fruit is commonly slightly smaller than in most European plants but the short ascending horns of the anthers are quite like those of European specimens. *V. occidentale* seems, then, to be essentially *V. uliginosum* of Europe, and the broader-leaved shrub of Oregon, Washington and British Columbia, as well as of the Lake Superior region, is likewise a good match for the European shrub.

The synonymy of var. *alpinum* is as follows:—

*V. ULIGINOSUM* L., var. *ALPINUM* Bigel. Fl. Bost. ed. 2: 153 (1824). *V. gaultherioides* Bigel. N. E. Journ. Med. v. 335 (1816). *V. pubescens* Wormsk. in Hornem. Fl. Dan. ix. 2, t. 1516 (1818). *V. salicinum* Cham. Linnaea, i. 525 (1826). *V. uliginosum*, γ *mucronatum* Herder, Pl. Radd. iv. 38 (1872); Gray, Syn. Fl. N. A. ii. pt. 1: 23 (1878). *V. uliginosum*, β. *pubescens* Lange, Consp. Fl. Grönl. 90 (1880) and

<sup>1</sup> Warming, Meddelelser om. Grönland, xxvi.—Repr. as The Structure and Biology of Arctic Fl. Pl. i. fig. 31 (1908).

<sup>2</sup> Reichenb. Ic. Fl. Germ. xvii. t. 1168, figs. iii, & iv. (1855).

<sup>3</sup> Bigelow, Fl. Bost. ed. 2: 153 (1824).

<sup>4</sup> Bigelow, N. E. Journ. Med. v. 335 (1816).

<sup>5</sup> Gray, Bot. Cal. i. 451 (1876).



subsp. *microphyllum* Lange, l. c. 91 (1880). *Myrtillus uliginosa*, var. *microphylla* (Lange) Simmons, Vasc. Pl. Ellesfjeld. 37 (1906). *M. uliginosa*, var. *pubescens* (Lange) Porsild, Meddel. om. Grönl. 1. 381 (1912).

Writers on Greenland plants maintain var. *pubescens* Lange (not *V. pubescens* Wormsk.) as a good variety, but southward the plants with glabrous and with more or less minutely pubescent foliage do not seem to be satisfactorily separable. In Newfoundland and on the mountains southward they are freely intermingled and can be separated only by a purely mechanical sorting of the two tendencies.

GRAY HERBARIUM

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## REPORTS ON THE FLORA OF THE BOSTON DISTRICT,—XXXVIII.

THIS report includes a series of rough-fruited plants which have been introduced into Massachusetts, mainly in wool. These plants have come up as waifs, mostly around woolen mills. Some of them, like *Echium vulgare*, have been real introductions, and have persisted and spread in enough places to become a permanent part of our flora. Most of them, coming to us from the West, from South America, and from Europe and Asia, have not found conditions here favorable to reproduction. No Australian plant has yet been reported, but the rest of the wool-growing world is well represented.

It is interesting to note that these waifs are not found in the shoe manufacturing towns of Massachusetts. Their favorite haunt seems to be the country about some of the smaller woolen mills, where the wool waste has been spread on the land, instead of being dumped and burned, as is done in the larger places. Many waifs like these have already been reported in other families, especially *Leguminosae* and *Geraniaceae*.

The committee has been fortunate in having access to the W. P. Alcott collection of these plants at the Peabody Academy of Science in Salem. The committee wishes especially to express appreciation of the assistance given by Mr. J. F. Macbride and Mr. I. M. Johnston in the identification of some of the difficult species.

## CONVOLVULACEAE.

## CONVOLVULUS.

**C. ARVENSIS** L. Waste places and grassland, occasional.

**C. sepium** L. Meadows and moist thickets, common.

**C. sepium** L., var. **pubescens** (Gray) Fernald. Seashore dunes and thickets, common.

## CUSCUTA.

**C. Cephalanthi** Engelm. On *Decodon* and *Impatiens*, Furnace Pond, Pembroke (*C. H. Knowlton & J. R. Churchill*, Sept. 6, 1920).

**C. compacta** Juss. In wet places, parasitic on various shrubs; Tewksbury, Hudson, Waltham, Wellesley, Natick, Needham and southward.

**C. EPILINUM** Weihe. From a flaxfield, Topsfield (*Herb. J. A. Lowell*, no date). Specimen in herb. Bos. Soc. Nat. Hist.

**C. Gronovii** Willd. Wet soil, parasitic on coarse herbs, sometimes on shrubs; common throughout.

**C. pentagona** Engelm. (*C. arvensis* Beyrich of Gray's Manual, 7th ed. See *Am. Journ. Sci.* xliii. 340, t. 6, figs. 22-4, 1842.) Abundant on herbs, sandy shores of Winter Pond, Winchester and Massapoag Pond, Sharon; also (waif?) Hillside Ave., Cambridge; rocky woods, climbing *Helianthus divaricatus*, Blue Hill, Canton (*N. T. Kidder*, Aug. 11, 1919).

[*C. trifolia* Babgt. Reported from Winchester on red clover, by A. V. Osmun in *RHODORA*, v. 291, 1904. Specimen not available for examination.]

## IPOMOEA.

**I. COCCINEA** L. By railway, Newton (*F. W. Grigg*, Sept. 5, 1896).

**I. COCCINEA** L., var. **hederifolia** (L.) Gray. Spontaneous on dumps along Charles River near Mt. Auburn (*B. L. Robinson*, Aug. 22, 1897; *W. P. Rich*, Aug. 28, 1897).

**I. HEDERACEA** Jacq. Little Canada dump, Lowell (*C. W. Swan*, Sept. 16, 1884); one plant, spontaneous in yard, Newton (*F. W. Grigg*, Oct. 5, 1911); also in Boston, according to *W. P. Rich* in *RHODORA*, x. 153, 1908.

**I. LACUNOSA** L. Little Canada dump, Lowell (*C. W. Swan*, Sept. 11, 1884). Specimen in herb. N. E. Botanical Club.

**I. PURPUREA** (L.) Roth. Gardens and waste places, occasional.



(Two other species listed by Dr. C. W. Swan in Dame & Collins, Fl. Middlesex Co., 77, 1888, are poor specimens, probably hybrids, impossible to identify exactly.)

### POLEMONIACEAE.

#### GILIA.

*G. INCONSPICUA* Dougl. Woolwaste, N. Chelmsford (*W. P. Alcott*, June 23, 1879). Specimen in herb. Peabody Acad. Sci. Adventive from California.

*G. LEUCOCEPHALA* Gray. Woolwaste, N. Chelmsford (*W. P. Alcott*, May, 1879). Specimen in herb. Peabody Acad. Sci. Adventive from California.

*G. MULTICAULIS* Benth. Dump, West Cambridge (*M. L. Fernald & B. Long*, Aug. 28, 1913). Specimen in herb. N. E. Botanical Club. Native of California.

*G. TRICOLOR* Benth., var. *LONGIPEDICELLATA* Greenman in Deane, *RHODORA*, vi. 154, 1904. On wool refuse, Lawrence, June 14, 1900, *John A. Collins, Jr.* Originally described from Mr. Collins's specimen, now in the Gray Herbarium. The variety is now known also from California, whence it was doubtless introduced. Reported in *RHODORA*, iii. 92, 1901, as *G. androsacea* Steud.

#### PHLOX.

*P. PANICULATA* L. Persistent or escaped from gardens at a few places.

*P. SUBULATA* L. Common in old cemeteries and gardens; frequently escaped from cultivation in sandy soil.

#### POLEMONIUM.

*P. OCCIDENTALE* Greene. One plant, border of pond, E. Gloucester, July, 1914. Specimen in herb. W. Deane. Adventive from Colorado and California.

### HYDROPHYLLACEAE.

#### ELLISIA.

*E. NYCTELEA* L. Border of Parkway, Everett (*W. P. Rich*, June 3, 1902). Specimen in herb. N. E. Botanical Club.

## HYDROPHYLLUM.

*H. VIRGINIANUM* L. Dedham (?) (*E. H. Hitchings*, September, 1883). Purgatory Swamp, Norwood (*N. T. Kidder*, June 9, 1883); escaped in open woods, Milton (*N. T. Kidder*, June 20, 1917).

## PHACELIA.

*P. BRACHYLOBA* Gray. Woolwaste, N. Chelmsford (*W. P. Alcott*, 1878); S. Boston flats (*C. E. Perkins*, June 25, 1879). A waif from California.

*P. MAGELLANICA* (Lam.) Cov. Woolwaste, N. Chelmsford (*W. P. Alcott*, 1878). Specimen in herb. Peabody Acad. Sci. Adventive from western America.

*P. MINOR* (Harvey) Thell., var. *WHITLAVIA* (Gray) Macbride. Woolwaste, N. Chelmsford (*W. P. Alcott*, 1878). Specimen in herb. Peabody Acad. Sci. A waif from California.

*P. TANACETIFOLIA* Benth. Woolwaste, N. Chelmsford (*W. P. Alcott*, June 10, 1879); spontaneous in garden, Newton (*Helen E. & F. W. Grigg*, July 24, 1892). A waif from California or northward.

[No specimen is available of Dr. T. Morong's *P. congesta* Hook. reported from Cambridge in Dame & Collins, Fl. Middlesex Co. 76, 1888.]

## BORAGINACEAE.

## AMSINCKIA.

*A. BARBATA* Greene. (*A. intermedia* Fisch. & Meyer in Dame & Collins, Fl. Middlesex Co., 75, 1888. See J. F. Macbride, in RHODORA, xviii. 27, 1916.) Chase's woolen mill, Lowell (*Miss M. Swan*, June 30, 1880). Specimen in herb. N. E. Botanical Club. Adventive from Pacific coast.

*A. DOUGLASIANA* DC. Woolwaste, N. Chelmsford (*W. P. Alcott*, 1878). Specimen in herb. Peabody Acad. Sci. Native of California.

*A. MENZIESII* (Lehm.) Nels. & Macbride. Abandoned henyard, Sherborn (*Miss M. L. Loomis*, June 10, 1919). Specimen in herb. Gray. Native of western United States and adjacent Canada.

## ANCHUSA.

*A. AZUREA* Mill. (*A. italica* Retz.) Vacant lot near South Ferry, E. Boston (*Dr. Franklin Dexter*, July 28, 1917; July 15, 1918). "In 1917 the field was blue with it. In 1918 the field was yellow with



mustard, and the second specimen was secured with difficulty." Specimen in herb. N. T. Kidder. Native of Mediterranean region.

A. OFFICINALIS L. See RHODORA, xviii. 50-51, 1916. Waste land, rather common in Fenway district of Boston since 1897; dump area, Cambridge (*R. A. Ware & F. W. Grigg*, Oct. 11, 1919); W. Cambridge (*F. S. Collins*, Aug. 20, 1911).

#### ASPERUGO.

A. PROCUMBENS L. Adventive in waste land; Newburyport, Salem, Malden, Somerville, S. Boston.

#### BORAGO.

B. OFFICINALIS L. Persistent in an old garden at Danvers (*J. H. Sears*, Aug. 10, 1904); Lowell (*J. A. Lowell*, 1848). Introduced from southern Europe or western Asia for its handsome flowers.

#### CRYPTANTHA.

C. INTERMEDIA (Gray) Greene. Woolwaste, N. Chelmsford (*W. P. Alcott*, 1878). Specimen in herb. Peabody Acad. Sci. Native of California and adjacent Mexico.

#### CYNOGLOSSUM.

(*C. boreale* Fernald. There is a specimen in the herbarium of the Boston Society of Natural History with the indefinite label "Boston, U. S. A., 1822. Rec'd from Dr. Boott, 11 Dec. 1822.")

C. MICROGLOCHIN Benth. Rubbish heap, Cambridge (*W. Deane*, Sept. 24, 1884). Specimen in herb. W. Deane. Native of the western Himalaya Mts.

C. OFFICINALE L. Waste places, occasional west and north of Boston, especially near woolen mills.

#### ECHIUM.

E. AUSTRALE Lam. About a dump, Cambridge (*M. L. Fernald & Bayard Long*, Aug. 28, 1913). Specimen in herb. N. E. Botanical Club. Native in the Mediterranean region.

E. VULGARE L. Waste places especially near woolen mills; frequent west and north of Boston, also at Brockton.

#### HELIOTROPIUM.

H. ANCHUSAEFOLIUM Poir. Vacant lots, Huron Ave., Cambridge (*E. F. Williams*, Sept. 3, 1910). Specimen in herb. N. E. Botanical

Club. Weed in garden, Milton (*N. T. Kidder*, Oct. 12, 1883, to date). Specimen in herb. *N. T. Kidder*. Native of Argentina.

*H. EUROPAEUM* L. Woolwaste, Graniteville, Westford (*F. Nickerson*, no date); rubbish heap, Cambridge (*W. Deane*, Sept. 26, 1884); weed of years' standing in Botanical Garden, Cambridge (*R. Cameron*, Sept. 16, 1918).

*H. INDICUM* L. Rubbish heap, Cambridge (*W. Deane*, Oct. 5, 1884). Specimen in herb. *W. Deane*. Native of the Old World Tropics.

### LAPPULA.

*L. ECHINATA* Gilib. Waste ground especially near woolen mills; frequent, especially north and west of Boston.

*L. virginiana* (L.) Greene. Moist shady places, frequent from Milton and Framingham northward.

### LITHOSPERMUM.

*L. ARVENSE* L. Dry soil, frequent.

*L. LATIFOLIUM* Michx. Adventive at Middleton (*A. S. Pease*, July 12, 1902). Specimen in herb. *N. E. Botanical Club*.

### LYCOPSIS.

*L. ARVENSIS* L. Introduced in cultivated soil, Essex and Ipswich (*Wm. Oakes*, no date); Georgetown (*Mrs. C. N. S. Horner*, July 22, 1882); Lowell (*F. Nickerson*, no date); about the Botanic Garden, wild but hardly naturalized, Cambridge (*E. Tuckerman, Jr.*, no date).

### MYOSOTIS.

*M. arvensis* (L.) Mill. Open woods and grassland, rare.

*M. laxa* Lehm. Swamps and wet places, frequent.

*M. MICRANTHA* Pallas. Adventive in dry soil at Nahant, Revere, Weston and Milton.

*M. SCORPIOIDES* L. Brooks and swamps, occasional; usually very abundant where found.

*M. SYLVATICA* Hoffm. Waif at edge of lawn, Adams Street, Milton (*N. T. Kidder*, June 12, 1920). Native of the north temperate region.

*M. virginica* (L.) B. S. P. Dry soil, common.



## SYMPHYTUM.

*S. ASPERUM* Lepechin. See J. F. Macbride, *RHODORA*, xviii. 23-5, 1916. Salem (*J. H. Sears*, June 10, 1904); Andover (*A. S. Pease*, July 6, 1901); Sherborn (*Miss M. L. Loomis*, July, 1909); Dump, S. Natick (*K. M. Wiegand & M. Heatley*, June 30, 1908); Lexington, well established near Munroe Station, according to M. P. Cook in *RHODORA*, i. 82, 1899.

*S. OFFICINALE* L. Moist places, frequent.

## VERBENACEAE.

## VERBENA.

*V. BRACTEOSA* Michx. Waste lands, especially near textile mills; Lowell, Malden, Cambridge, S. Boston.

*V. hastata* L. Swamps and wet places, common throughout.

*V. HISPIDA* Ruiz & Pavon. About dumps, Cambridge (*A. S. Pease*, Oct. 16, 1908; *W. Deane et al.*, Aug. 28, 1913). A South American waif.

*V. OFFICINALIS* L. Rowley (*Wm. Oakes*, no date); S. Boston (*C. E. Perkins*, Sept. 27, 1880).

*V. STRICTA* Vent. Lawrence, waste heap (*M. E. Gutterson*, Aug. 6, 1902; *A. S. Pease*, Sept. 23, 1902).

*V. urticaefolia* L. Roadsides and moist places, common throughout.

C. H. KNOWLTON }  
WALTER DEANE } *Committee on Local Flora.*

## CORALLORRHIZA MACULATA RAF.

## O. A. FARWELL.

In *RHODORA* for August, 1922, Dr. H. H. Bartlett, of the Botanical Garden, University of Michigan, Ann Arbor, presents a highly interesting paper on the color types of this species, attributing them to anthocyanins and glucosides of the flavonal group and maintaining that these types are genetical entities and not mere variations due to environment, and therefore of greater permanence and categorical value. The specific type is named var. *punicea*; the yellow type var. *flavida* (Peck) as a new combination; and the intermediate

form, which he calls the brown form, as a new var., *fusca*. In view of the widely scattered publications relating to the taxonomy of plants, it is not at all surprising that Dr. Bartlett missed a reference or two in his search of the literature pertaining to the subject. In *Torreyia* Vol. 16, page 231 for October, 1916, Prof. T. D. A. Cockerell published the new combination for the yellow type. In the Michigan Academy of Science, 19th Report for 1916, page 247, I published the brown type as *C. maculata* Raf. var. *intermedia*. Dr. Bartlett's var. *fusca*, therefore becomes a synonym of var. *intermedia*. The plants upon which the two varietal names for the brown form are based came from the same locality, Copper Harbor, Keweenaw Co., Mich. The only difference that I can detect from Dr. Bartlett's description of the var. *fusca* is that Mr. Hermann's specimens had spotted flowers as well as spotted lips while my specimens had purplish spots on the lips only. This slight difference, however, can scarcely be considered of such importance as to maintain the two as of different varieties.

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